INTERNATIONAL SEARCH REPORT

International application No. PCT/SE 2004/000525

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04Q 11/00, H04L 5/00, H04J 1/00, H04L 12/42 // T04L 12/64B12 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H04L, H04Q, H04J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
Y	WO 9943123 A1 (TELIA AB (PUBL)), 29 August 1999 (29.08.1999), page 1, line 1 - page 3, line 9, claims 1-28, abstract, cited in Application	1-15	
Y	MESTDAGH, D G et al: Zipper VDSL: a solution for robust duplex communication over telephone lines. In: Communications Magazine, IEEE, May 2000, pages 90-96, vol.38, issue 5, INSPEC AN: 6601305. See whole document	1-15	
			
A	EP 0991202 A1 (STMICROELECTRONICS SA), 5 April 2000 (05.04.2000), claims 1-5, abstract, cited in Application	1-15	
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X Further documents are listed in the continuation of Box			C. X See patent family annex.		
* 'A' 'E' 'L' 'O' 'P'	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance earlier application or patent but published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed	"T" "X" "Y"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family		
Date of the actual completion of the international search 2 April 2004		Date of mailing of the international search report 2 4 -06- 2004			
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86		Authorized officer Roger Bou Faisal /LR Telephone No. +46 8 782 25 00			

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2004/000525

		
Ç (Continu	nation). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	US 6333920 B1 (NGUYEN, M-H ET AL), 25 December 2001 (25.12.2001), claims 19-22, abstract	1-15
A	US 6373860 B1 (0'TOOLE, A J P ET AL), 16 April 2002 (16.04.2002), abstract	1-15
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INTERNATIONAL SEARCH REPORT

Information on patent family members

31/03/2004

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	₩0	9943123	A1	29/08/1999	AU EP SE SE WO DE EP US	7458198 A 1062760 A 514016 C 9800539 D 9801150 A 9948575 A 69818998 D 0991908 A,B 6382069 B	18/10/1999 27/12/2000 11/12/2000 00/00/0000 22/08/1999 30/09/1999 00/00/0000 12/04/2000 07/05/2002
	EP	0991202	A1	05/04/2000	DE JP	69810293 D,T 2000115032 A	13/11/2003 21/04/2000
_	US	6333920	B1	25/12/2001	US	2001006509 A	05/07/2001
	US	6373860	B1	16/04/2002	US	2002054597 A	09/05/2002